

Prairie piping plover conservation : ... annu
al report

No: 1988 Date: 890100

3003385F
EXD 1

00FF

PRAIRIE PIPING PLOVER CONSERVATION:

FIRST ANNUAL REPORT (1988)

J. Paul Goossen

Team Leader

Prairie Piping Plover Recovery Team

Canadian Wildlife Service

2nd Floor, 4999 - 98 Avenue

Edmonton, Alberta

T6B 2X3

January 1989



Environment Canada

Canadian Wildlife
Service

Environnement Canada

Service canadien de la
faune

Canada

PRAIRIE PIPING PLOVER CONSERVATION:

FIRST ANNUAL REPORT (1988)

**J. Paul Goossen
Team Leader
Prairie Piping Plover Recovery Team
Canadian Wildlife Service
Room 210, 4999 98 Avenue
Edmonton, Alberta T6B 2X3**

January 1989

TABLE OF CONTENTS

	PAGE
LIST OF TABLES.....	ii
INTRODUCTION.....	1
A. PIPING PLOVER RECOVERY TEAMS.....	1
1. NATIONAL TEAM.....	1
2. PRAIRIE PIPING PLOVER RECOVERY TEAM.....	2
3. ATLANTIC PIPING PLOVER RECOVERY TEAM.....	3
B. NATIONAL RECOVERY PLAN.....	4
C. REGIONAL RESEARCH AND CONSERVATION ACTIVITIES.....	4
1. ALBERTA.....	4
Canadian Wildlife Service.....	4
Sweetgrass Consultants Ltd.....	4
Alberta Recreation and Parks.....	5
2. SASKATCHEWAN.....	5
Canadian Wildlife Service.....	5
Prairie Environmental Services Inc.....	5
Saskatchewan Institute of Applied Science and Technology.....	5
Saskatchewan Natural History Society.....	6
Saskatchewan Wildlife Branch.....	6
3. MANITOBA.....	6
Manitoba Wildlife Branch.....	6
University of Manitoba.....	7
4. ONTARIO.....	7
Ontario Ministry of Natural Resources.....	7
Great Lakes and Southern Ontario.....	7
D. NORTH AMERICAN AND PRAIRIE CANADA PIPING PLOVER POPULATIONS - 1988.	8
E. BANDING - 1988.....	11
F. FUTURE EVENTS.....	11
1. INTERNATIONAL CENSUS.....	11
2. PRAIRIE SHOREBIRD WORKSHOP.....	13
G. NEW INITIATIVES.....	13
1. RECOVERY OF NATIONALLY ENDANGERED WILDLIFE IN CANADA.....	13
2. ENDANGERED SPECIES RECOVERY FUND.....	14
3. PRAIRIE FOR TOMMORROW.....	14
H. REPORTS AND PUBLICATIONS - 1988.....	14
Prairie Canada.....	14
Atlantic Canada.....	17
I. AGENCY SUPPORT -1988.....	17

LIST OF TABLES

Table	Page
1. 1988 Piping Plover (PiPl) population estimate for North America....	9
2. 1988 Piping Plover population estimate for Prairie Canada.....	10
3. Number of Piping Plovers banded during 1988 in Prairie Canada.....	12
4. Agencies involved in Piping Plover research and/or conservation in Prairie Canada during 1988.....	18

INTRODUCTION

This is the first annual report on Piping Plover (Charadrius melodus) research and conservation in Prairie Canada. I hope you find it informative and that it keeps you abreast of current activities. If you have any suggestions on improvements please let me know.

The tenor and format of this report is a hybrid between a newsletter and a report with brief information given on a variety of plover-related subjects. This report covers primarily the Prairie Canada region which includes Alberta, Saskatchewan, Manitoba and northwestern Ontario, i.e. the northern extant of the western Piping Plover population. Information on plovers in the Great Lakes area as well as national and international information and publications will also be included, but to a lesser extent.

The contents of this report are a result of contacts with individuals during this past year and information gleaned mostly from reports and publications included in the list found on pages 14-17.

I thank all of you who provided me with information thereby making this report possible.

A. PIPING PLOVER RECOVERY TEAMS

1. NATIONAL TEAM

A national meeting for government and nongovernment representatives was held in Hull, Quebec in April 1988 to decide what action should be taken to conserve the Piping Plover at the national and regional

levels. It was decided that two teams would operate regionally: a Prairie and an Atlantic team. The National team would consist of the Canadian Wildlife Service's (CWS) Endangered Species Coordinator (C. Dauphiné), the team leader from each of the two regional recovery teams, and national nongovernment organizations (NGOs).

Responsibilities of the national team will include regional, national and international activities besides working toward National Recovery plan approval.

Canada and the United States have recognized the importance of international cooperation in Piping Plover conservation and to this end have identified individuals from both countries who will assist each other's recovery teams.

2. PRAIRIE PIPING PLOVER RECOVERY TEAM

The seven team members which make up the Prairie Piping Plover Recovery Team (PPPRT) are Irene Bowman (Ontario Ministry of Natural Resources), Steve Brechtal (Alberta Fish and Wildlife), Paul Goossen (Team Leader, CWS Western and Northern Region), Wayne Harris (nongovernment), Dale Hjertaas (Saskatchewan Wildlife Branch), Bill Koonz (Manitoba Wildlife Branch) and Guy Morrison (CWS, Ontario Region). John Sidle of the Great Lakes/Northern Great Plains Recovery Team is the American observer to the Prairie team while Paul Goossen is the Canadian counterpart to that American team. Susan Haig is the American National Coordinator who provides input to both Canadian and American Piping Plover recovery teams.

The PPPRT met for the first time in Saskatoon on 4, 5 October 1988. Most team members were present. The team decided on actions

required to assist in recovery efforts in Prairie Canada and identified action priorities which would be recommended for funding. These included determining the distribution of Piping Plover in Saskatchewan, annual monitoring of sites in each of the four provinces, habitat research, wintering ground surveys and habitat securement.

3. ATLANTIC PIPING PLOVER RECOVERY TEAM

The Atlantic Team met for the first time in Sackville, New Brunswick on 8, 9 November 1988. The team includes Peter Austin-Smith (Nova Scotia Wildlife Division), Joe Brazil (Newfoundland Wildlife Service), Dave Cartwright (New Brunswick Department of Natural Resources), Gary Corbett (Canadian Parks Service), Randy Dibblee (Prince Edward Island Fish and Wildlife Division), Bruce Johnson (Team Leader, CWS Atlantic Region), Pierre Laporte (CWS, Quebec Region), Michel Lepage (Quebec Ministère du Loisir de la Chasse et de la pêche) and Dan McAskill (non government). Anne Hecht of the American Atlantic Coast Piping Plover Recovery Team is the observer to the Canadian Atlantic team while Bruce Johnson is the observer to the American Atlantic team which met in Boston on 29, 30 November 1988. S. Haig, the American National Coordinator, maintains contact with both teams. The Atlantic team is responsible for Piping Plovers in Quebec, Newfoundland/Labrador, Prince Edward Island, Nova Scotia and New Brunswick. The team determined detailed action plans, specifically needed for Atlantic Canada, and their related costs and the effort required to carry them out. Support for the 1991 North American breeding survey was also discussed.

B. NATIONAL RECOVERY PLAN

The National Recovery Plan is still in a draft stage. The goal is to have it finalized and then approved through the Recovery of Nationally Endangered Wildlife (RENEW) committee by June 1989.

C. REGIONAL RESEARCH AND CONSERVATION ACTIVITIES

1. ALBERTA

Canadian Wildlife Service: Breeding Piping Plovers were monitored at three lakes near Hanna, Alberta during the second year of this breeding biology study. Forty nests were monitored and 10 surveys were conducted at each lake. Populations were relatively stable compared with last year even though drought conditions intensified. This stability contrasts with the apparent population crash in Saskatchewan and the reported increase in Manitoba. Five unhatched eggs were analysed for toxic chemicals (Won 1988b). Chemical data received on seven eggs (Won 1988a) sent last year indicate the eggs were relatively "clean" (G. Fox, pers. comm.). P. Goossen has submitted a Hinterland Who's Who draft on the Piping Plover which will be published in 1989 or 1990.

Sweetgrass Consultants Ltd.: C. Wershler submitted two reports on management guidelines for: one for Little Fish Lake (Wershler 1988a) and one of the Reflex lakes (Wershler 1988b). He also reported on additional survey work done in Alberta during 1987 (Wershler 1988c) which resulted in the finding of eight adults and five young at a previously unknown breeding location near Mestiskow. Wershler stressed the importance conserving "the few key Piping Plover breeding habitats" which support most plovers in Alberta.

Alberta Recreation and Parks: Parks' staff at Lesser Slave Lake Provincial Park reported a single Piping Plover, seen on 1 June 1988, at Lesser Slave Lake (55° 25' N, 114° 50'W), possibly the second such record for Lesser Slave Lake, the most northerly known lake from which Piping Plovers have been reported in Alberta.

Alberta Recreation and Parks and Alberta Fish and Wildlife are cooperatively developing a management plan for the population of Piping Plovers at Little Fish Lake based on recommendations put forth by Wershler (1988a). Little Fish Lake borders on Handhills Ecological Reserve which came into being in January 1988.

2. SASKATCHEWAN

Canadian Wildlife Service: P. Goossen examined habitat at 50 waterbodies in west-central Saskatchewan. Water levels were such that beaches were too narrow in most areas to provide adequate nesting conditions. Only five plovers and two nests were located.

Prairie Environmental Services Inc.: A productivity survey was done in July 1988 at Lake Diefenbaker and survey efforts were made at Big Quill Lake, Old Wives Lake, Fife Lake and Antelope Lake (W. Harris, unpubl. data).

Saskatchewan Institute of Applied Science and Technology: A video, entitled "As Rare as Hens' Teeth", was produced by the Saskatchewan Institute of Applied Science and Technology (Woodland Campus) to promote public awareness of endangered species, including the Piping Plover.

Saskatchewan Natural History Society: The Saskatchewan Natural History Society (SNHS) coordinated the first major Piping Plover survey of the South Saskatchewan River. Johnson and Weichel Resource Management Consultants, M. A. Purdy, and Prairie Environmental Services Inc. carried out the fieldwork. About 315 km of river and 240 km of Lake Diefenbaker habitats were searched, resulting in 143 plovers being located. Only two adults were seen between the Alberta border and Miry Bay, while the east end of Lake Diefenbaker held at least 97 adults (126 fewer birds than in 1984 even with additional habitat searched in 1988). The good news was that 44 adults were seen between Gardiner Dam and Saskatoon. This represents the most number of Piping Plovers reported on true river habitat in Prairie Canada. SNHS also funded and coordinated a habitat enhancement study at Chaplin Lake (see below).

Saskatchewan Wildlife Branch: D. Hjertaas, in cooperation with the SNHS, designed the Chaplin Lake habitat enhancement project. Gravel was spread in February and the site was monitored during the spring. No plovers nested on the gravel, however Chaplin Lake was almost dry because of severe drought conditions and in fact W. Harris (Prairie Environmental Services Inc.) found only two broods on this lake. Hjertaas has also worked together with Ducks Unlimited in planning habitat enhancement at Little Quill Lake.

3. MANITOBA

Manitoba Wildlife Branch: Important Manitoba plover nesting areas, West Shoal Lake, Riverton islands and Long Point on Lake Winnipeg, were surveyed (Koonz 1988). At least 120 adults were located at these and other sites checked in the province. The 1988 provincial estimate was

about 200 plovers. Koonz thinks drought conditions in the south and west may be connected with the increased number of plovers seen in 1988 compared with 1987.

University of Manitoba: Robert Berger's extensive draft recovery plan (Berger 1988), written for one of his Natural Resources Institute courses provides the Manitoba Wildlife Branch with a guide in planning plover conservation in that province.

4. ONTARIO

Ontario Ministry of Natural Resources: The Ontario Ministry of Natural Resources (OMNR) surveyed Sable Islands and Windy Point (Heyens 1988). One nest was found on the Sable Islands and three adult plovers were present during a 12 June 1988 survey. A visit, on 22 July 1988, to the area where the nest had been previously found revealed two adult plovers and three young. No plovers were seen at Windy Point during a survey on 13 June 1988 however plovers were reported for this area in 1988. Four of 5 plovers reported by the Minnesota Department of Natural Resources after visits to the Sable Islands on 16 and 21 June 1988 were suspected to be "probably... breeders" (Maxson et al. 1988). The OMNR is continuing to plan their approach to plover conservation, with Helen Gersen completing a second draft of Ontario's recovery plan (Gerson 1988).

Great Lakes and Southern Ontario: To my knowledge only three Piping Plovers were seen in this region (The Globe and Mail 30 July 1988), one at Ottawa and the another at Fort Erie. I do not know the location of

the third sighting. Does anyone have any other reports or information on plovers in this area?

D. NORTH AMERICAN AND PRAIRIE CANADA PIPING PLOVER POPULATIONS - 1988

The 1988 North American Piping Plover adult population was estimated to be about 3950 individuals (Table 1). This is an apparent decline of 2.4 to 5.6% from the 1986-87 estimates. In general, Atlantic populations increased while the plains population declined. In the United States plover numbers were up 3.8%, while in Canada they declined by 12.0 to 18.9%. Apparent declines and increases should be interpreted very cautiously since estimation errors and sampling effort could influence the perceived degree of change from one year to another.

Complete censuses in Prairie Canada were not carried out in 1988 and only a rough estimate of 930 plovers was made (Tables 1, 2). Drought conditions severely impacted habitat in Saskatchewan where the greatest decline in plover numbers was reported. The Saskatchewan population, in 1988, was down 75-80% from the 1984 provincial estimate of 2000 - 2500 plovers (Harris, W. et al. 1985. Saskatchewan Piping Plovers - 1984. Unpublished report prepared for SNHS and the Sask. Wildlife Branch) but only 30-38% down from a 1986 estimate of 712-800 individuals (Haig et al. 1988, see footnote 1 of Table 2 in this report). Manitoba however had an increase (Koonz 1988) of at least 35% over last year's observed number of adult plovers (N=89) (Moszynski et al. 1988) possibly because of dispersal due to drought (Koonz 1988). Alberta's populations presumably remained stable, if the population trend near Hanna was any indication. In the Lake of the Woods area, at Sable Islands and Windy Point, 1988 plover populations were down by 50% over the 1987 count

Table 1. 1988 Piping Plover (PiPl) population estimate for North America.¹

Location	Adults	Pairs	1987 Pairs	%Increase/ Decline
Breeding Census:				
Prairie Canada	930	465	576-644	-19.3-27.8%
U. S. Great Plains	1305	653	682	-4.3%
Total Prairie & Plains	2235	1118	1258-1326	-11.1-15.7%
Great Lakes	31	15	17	-11.8%
Atlantic Canada	484	238	223	+6.3%
U. S. Atlantic	1202	601	522	+13.1%
Total Atlantic	1686	839	745	+11.2%
Total U.S.	2538	1269	1221	+3.8%
Total Canada	1414	703	799-867	-12.0-18.9%
Total PIPL	3952	1972	2020-2088	-2.4-5.6%
Winter Census:				
Atlantic sites	222			
Gulf of Mexico sites	1508			
Total PIPL seen	1730			

¹S. Haig (unpublished data) and Haig *et al.* 1988.

Table 2. 1988 Piping Plover population estimate for Prairie Canada.

Province	Adults	
	1986 ¹	1988 ²
Alberta	300	295
Saskatchewan	712-800	<500
Manitoba	132-180	130 ³
Ontario ⁴	<u>8</u>	<u>5</u>
Total	1152-1288	930

¹ Pair data for 1986 taken from Haig *et al.* 1988 and multiplied by two, to get number of adults.

² S.M. Haig unpublished data.

³ Koonz (1988) reported 120 adults seen and estimated the provincial population at about 200 plovers.

⁴ Lake of the Woods only.

of 10 plovers (Heyens, L.E. 1987. Piping Plover survey Sable Islands Provincial Nature Reserve. Piping Plover survey Windy Point - Lake of the Woods. Unpublished field report, OMNR).

E. BANDING - 1988

Two adults and 66 young were banded in Prairie Canada during 1988 (Table 3). Two colour-banded adults were seen in Saskatchewan, one at Little Quill Lake by Loney Dickson and Al Smith, both of CWS, and the other by Susan McAdam (Prairie Environmental Services) at Lake Diefenbaker. The origin of both birds is unknown. Banded plovers were seen at West Shoal Lake in Manitoba, presumably birds banded during Susan Haig's study (Koonz 1988, Haig and Oring 1988c).

CWS found that over 80% of adults colour-banded (N=6) in 1987 returned to the Hanna area in Alberta during 1988. Only one of the 58 (0.02%) chicks banded last year near Hanna was confirmed to have returned in 1988 near to its natal site at one of the Chain Lakes. One other metal-banded (no colour bands) adult of unknown origin was seen at Dowling Lake. Young, banded at Handhills Lake, Alberta, were seen in the Gulf of Mexico coast region (at least one each in Texas and Florida - see Haig and Oring 1988c).

F. FUTURE EVENTS

1. INTERNATIONAL CENSUS

At the November 1988 meeting of the Great Lakes/Northern Great Plains Recovery Team meeting, it was decided that the survey would be carried out in 1991 with some possible spill over of winter surveys into 1992. The latter team is responsible for organizing the 1991 survey and will

Table 3. Number of Piping Plovers banded during 1988 in Prairie Canada.

Province	Site	Adults	Young	Source
Alberta	Dowling Lake		17	J. P. Goossen
	Bandhills Lake		25	J. P. Goossen
Saskatchewan	Antelope Lake		1	W. C. Harris
	Big Quill Lake		2	W. C. Harris
	Chaplin Lake	2	2	A. R. Smith
				W. C. Harris
	Lake Diefenbaker		12	W. C. Harris
Manitoba	Riverton islands	—	7	W. H. Koonz
Total		2	66	

need the cooperation and assistance of states, provinces, NGOs and federal wildlife agencies to make this a successful venture. The PPPRT will be involved in planning the Prairie Canada portion of the survey. CWS has already had a favourable discussion with Cuban representatives who are interested in participating in the winter portion of the survey.

2. PRAIRIE SHOREBIRD WORKSHOP

A one day workshop on shorebirds in the prairies will be held during the Prairie Conservation and Endangered Species Workshop (27-29 January 1989) in Regina, Saskatchewan. There will be one Canadian and several North Dakota presentations on Piping Plovers.

G. NEW INITIATIVES

1. RECOVERY OF NATIONALLY ENDANGERED WILDLIFE IN CANADA

RENEW is a new strategy for coordinating threatened species work on a national scale involving provincial, territorial and federal governments as well as national NGOs. A committee will be formed which will be responsible for designating recovery teams and approving recovery plans. We anticipate that the Piping Plover recovery plan will be the first recovery plan to be approved by this committee. Only two other approved recovery plans exist in Canada: one for the Whooping Crane (Grus americana) and the other for the Peregrine Falcon (Falco peregrinus anatum). Both of these plans were approved prior to RENEW. If you wish further information on RENEW, please contact Paul Goossen at 403-468-8921.

2. ENDANGERED SPECIES RECOVERY FUND

World Wildlife Fund Canada (WWF) and the federal Department of the Environment (DOE) have agreed to a four-year fund providing two million dollars for extirpated, endangered, threatened and rare/vulnerable wildlife. Only NGOs and individuals can apply directly to the fund. WWF and DOE will contribute two-thirds funding to accepted projects up to a maximum of \$50,000 however the proponent is responsible for supplying the remaining third. RENEW will have the opportunity to recommend funding priorities. For further information contact Mr. Steven Price, World Wildlife Fund Canada, 60 St. Clair Avenue East, Suite 201, Toronto, Ontario, M4T 1N5.

Anyone developing a proposal on the Piping Plover in Prairie Canada should first contact the PPPRT team leader (Paul Goossen) before submitting the proposal to WWF.

3. PRAIRIE FOR TOMMORROW

WWF in cooperation with Alberta Fish and Wildlife have initiated this new program in Alberta aimed at habitat preservation and landowner participation. The Piping Plover will receive attention, with plans already underway to develop a management strategy for this species in Alberta.

H. REPORTS AND PUBLICATIONS - 1988

Prairie Canada

Berger, R. 1988. Piping Plover (Charadrius melodus) recovery plan for

- Manitoba. Unpublished draft. University of Manitoba.
- Gaines Prindiville, E. and M.R. Ryan. 1988. Piping Plover habitat use and reproductive success in North Dakota. J. Wildl. Manage. 52:266-273. (Productivity data for Manitoba and Saskatchewan).
- Gerson, H. 1988. Recovery plan for the Piping Plover in Ontario. Unpublished second draft. Ontario Ministry of Natural Resources.
- Goossen, J. P. 1988. Progress report on monitoring Piping Plovers for toxic chemical residues. Unpublished internal Canadian Wildlife Service report. 3 pp.
- Haig, S. M. and L.W. Oring. 1988a. Genetic differentiation of Piping Plovers across North America. Auk 105:260-267.
- Haig, S. M. and L. W. Oring. 1988b. Mate, site, and territory fidelity in Piping Plovers. Auk 105:268-277.
- Haig, S. M. and L. W. Oring. 1988c. Distribution and dispersal in the Piping Plover. Auk 105:630-638.
- Haig, S., W. Harrison, R. Lock, L. Pfannmuller, E. Pike, M. Ryan and J. Sidle. 1988. Great Lakes and Northern Great Plains Piping Plover recovery plan. United States Fish and Wildlife Service, Twin Cities, Minnesota. 160 pp.
- Harris, W. C. 1988. South Saskatchewan River Piping Plover survey - 1988 (Lake Diefenbaker segment - Riverhurst Ferry to dam). Unpublished report prepared for the Saskatchewan Natural History Society. 10 pp. plus a map.
- Heyens, L.E. 1988. Piping Plover survey Sable Islands Provincial Nature Reserve. Piping Plover Survey Windy Point Lake of the Woods. Unpublished field report. Ontario Ministry of Natural Resources. 2 pp. plus a map and bird checklist.

Koonz, W. H. 1988. Piping Plover observations Manitoba 1988.

Unpublished Manitoba Natural Resources report. 4 pp. plus map.

Maxson, S. J. , K.V. Haws and L. W. Oring. 1988 . 1988 status and breeding summary of Piping Plovers and Common Terns at Lake of the Woods, Minnesota. Unpublished report, Minnesota Department of Natural Resources. 8 pp. plus tables, a banding schedule and a figure. (Plover information for Sable Islands, Ontario).

Moszynski, R., W.H. Koonz and K. De Smet. 1988. Manitoba Piping Plover Survey, 1987. Unpublished Manitoba Natural Resources report. 24 pp. plus appendices.

Purdy, M. A. and B. J. Weichel. 1988. Piping Plover survey: South Saskatchewan River - Red Deer confluence to Miry Bay and Gardiner Dam to Saskatoon. Unpublished report prepared for the Saskatchewan Natural History Society. 13 pp. plus appendices.

Wershler, C.R. 1988a. Monitoring of Piping Plovers, habitat, and land use at Little Fish Lake, Alberta. Unpublished report prepared for Alberta Recreation and Parks, World Wildlife Fund Canada, Alberta Fish and Wildlife and the Canadian Wildlife Service. 10 pp. plus two maps.

Wershler, C.R. 1988b. Monitoring of Piping Plovers, habitat, and land use at Reflex Lake, Alberta. Unpublished report prepared for World Wildlife Fund Canada, Alberta Fish and Wildlife and the Canadian Wildlife Service. 10 pp. plus copy of airphoto.

Wershler, C.R. 1988c. Piping Plover breeding habitat census and monitoring program Alberta 1987. Unpublished report prepared for World Wildlife Fund Canada, Alberta Fish and Wildlife and the Canadian Wildlife Service. 6 pp. plus four maps.

Won, H. T. 1988a. Analysis of Piping Plover eggs, Ivory Gull eggs and Red-throated Loon samples. Unpublished Canadian Wildlife Service report 87-10. 22 pp. plus attachments.

Won, H. T. 1988b. Analysis of Piping Plover egg samples for OCs and PCBs. Unpublished Canadian Wildlife Service analytical report 88-12. 21 pp. plus attachments.

Atlantic Canada

Dyer, R. W., A. Hecht, S. Melvin, C. Raithel and K. Terwilliger. 1988. Atlantic Coast Piping Plover recovery plan. United States Fish and Wildlife Service, Newton Corner, Massachusetts. 74 pp.

Flemming, S. P., R. D. Chiasson, P. C. Smith, P. J. Austin-Smith, and R. P. Bancroft. 1988. Piping Plover status in Nova Scotia related to its reproductive and behavioral responses to human disturbance. J. Field Ornithol. 59:321-330.

MacEachern, P. and S. Barrett. 1988. A: Crowbush/Lakeside Piping Plover population survey and landowner contact program. B: Hillsborough Bridge piers Common Tern colony study. Natural History Society of Prince Edward Island 1988 Seeds project report. 20 pp. plus appendices.

Paquin, J. 1988. Pitié pour le pluvier siffleur. Franc-Nord 5:10-13.

I. AGENCY SUPPORT - 1988

Often the agencies which provide funding and personnel are not adequately recognized for their interest and efforts. It is fitting therefore in this annual report to acknowledge over 15 organizations (Table 4) which have participated in plover conservation in Prairie Canada.

Table 4. Agencies involved in Piping Plover research and/or conservation in Prairie Canada during 1988.

Agency	Type of involvement	Type of support
1. Alberta Fish and Wildlife	Management/survey/ recovery team	Funding/personnel
2. Alberta Recreation and Parks	Sighting/management	Personnel
3. Canadian Wildlife Service	Research/survey/ recovery team	Funding/Personnel
4. Ducks Unlimited Canada	Habitat planning	Personnel
5. Elsa Wild Animal Appeal of Canada	Survey	Funding
6. Johnson and Weichel Resource Management Consultants	Survey	Contractor
7. Manitoba Parks Branch	Protection/public education	Personnel
8. Manitoba Wildlife Branch	Survey/recovery team/ protection	Personnel
9. Minnesota Department of Natural Resources	Survey	Personnel
10. Ontario Ministry of Natural Resources	Survey/recovery team	Personnel
11. Prairie Environmental Services Inc.	Survey	Contractor
12. Purdy, M. A.	Survey	Contractor
13. Saskatchewan Institute of Applied Science and Technology	Video	Personnel
14. Saskatchewan Natural History Society	Survey/habitat enhancement	Coordination/ funding/public education
15. Saskatchewan Wildlife Branch	Habitat enhancement/ recovery team	Design/ personnel

<u>Agency</u>	<u>Type of involvement</u>	<u>Type of support</u>
16. Sweetgrass Consultants Ltd.	Report(s)-management and survey	Consultant
17. United States Fish and Wildlife Service	Recovery team personnel agreement	Personnel
18. University of Manitoba	Recovery plan draft	Student
19. World Wildlife Fund	Survey	Funding